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(54) Title: INHIBITION OF SYSTEMIC INFECTIONS IN HUMANS AND VERTEBRATES BY DIETARY FIBERS

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(57) **Abstract:** The use of a dietary fiber or mixture of dietary fibers for the manufacture of a composition, such as a pharmaceutical composition, a functional food or a functional feed, for the prevention, the inhibition and/or treatment of systemic infections in humans and in vertebrates caused by pathogenic bacteria is disclosed. A method for preventing and/or inhibiting the systemic growth of pathogenic bacteria in humans and vertebrates, and a method for the prevention, the inhibition and/or the treatment of systemic infections in humans and in vertebrates caused by pathogenic bacteria, comprising administration to said beings a composition containing an effective amount of a dietary fiber or mixture of dietary fibers, are also disclosed. The dietary fiber is preferably a fructan, typically inulin and/or oligofructose, most preferably chicory inulin with an average degree of polymerisation *DP* of at least 20. The composition and methods are useful for the prevention, inhibition and/or treatment of systemic infections in fish, particularly during cultivation in fish farms.

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A61K31/736 A61K31/733 A61K31/732 A61K31/731 A61K31/718 A61K31/717 A61P31/04							
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B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 A61K							
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched							
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) BIOSIS, MEDLINE, EMBASE, EPO-Internal							
C. DOCUMENTS CONSIDERED TO BE RELEVANT <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding: 2px;">Category</th> <th style="text-align: left; padding: 2px;">Citation of document, with indication, where appropriate, of the relevant passages</th> <th style="text-align: left; padding: 2px;">Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 2px;">X</td> <td style="padding: 2px;"> DATABASE BIOSIS 'Online! BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US: 1991 YANO T ET AL: "POLYSACCHARIDE-INDUCED PROTECTION OF CARP CYPRINUS-CARPIO L. AGAINST BACTERIAL INFECTION" Database accession no. PREV199293115402 XP002194171 abstract & JOURNAL OF FISH DISEASES, vol. 14, no. 5, 1991, pages 577-582, ISSN: 0140-7775 --- -/-/ </td> <td style="text-align: center; padding: 2px;">1-5, 8-14, 17, 18</td> </tr> </tbody> </table>		Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	DATABASE BIOSIS 'Online! BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US: 1991 YANO T ET AL: "POLYSACCHARIDE-INDUCED PROTECTION OF CARP CYPRINUS-CARPIO L. AGAINST BACTERIAL INFECTION" Database accession no. PREV199293115402 XP002194171 abstract & JOURNAL OF FISH DISEASES, vol. 14, no. 5, 1991, pages 577-582, ISSN: 0140-7775 --- -/-/	1-5, 8-14, 17, 18
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
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X	<p>ROBERFROID MARCEL B ET AL: "The bifidogenic nature of chicory inulin and its hydrolysis products." JOURNAL OF NUTRITION, vol. 128, no. 1, January 1998 (1998-01), pages 11-19, XP002194167 ISSN: 0022-3166 abstract page 16, left-hand column, paragraph 5 -page 18, right-hand column, paragraph 2; figures 7-9; table 2 page 13, right-hand column, paragraph 1</p> <p>---</p>	1-7, 10-16
X	<p>GIBSON GLENN R: "Dietary modulation of the human gut microflora using the prebiotics oligofructose and inulin." JOURNAL OF NUTRITION, vol. 129, no. 7 SUPPL., July 1999 (1999-07), pages 1438S-1441S, XP002194168 ISSN: 0022-3166 page 1440S, left-hand column, paragraph 1 -page 1440S, right-hand column, paragraph 4; table 2</p> <p>---</p>	1-7, 10-16
X	<p>GIANOTTI L ET AL: "Fiber-enriched diet prevents bacterial translocation from the intestine to systemic organs." RIVISTA ITALIANA DI NUTRIZIONE PARENTERALE ED ENTERALE, vol. 11, no. 1, 1993, pages 16-22, XP001063296 ISSN: 0393-5582 abstract page 20</p> <p>---</p>	1-5, 10-14
X	<p>JENKINS DAVID J A ET AL: "Inulin, oligofructose and intestinal function." JOURNAL OF NUTRITION, vol. 129, no. 7 SUPPL., July 1999 (1999-07), pages 1431S-1433S, XP002194169 ISSN: 0022-3166 abstract page 1432S, right-hand column, paragraph 3 -page 1433S, left-hand column, paragraph 3</p> <p>---</p> <p>-/-</p>	1-5, 10-14

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Y	<p>MENNE EVELYNE ET AL: "Fn-type chicory inulin hydrolysate has a prebiotic effect in humans." JOURNAL OF NUTRITION, vol. 130, no. 5, May 2000 (2000-05), pages 1197-1199, XP002194170 ISSN: 0022-3166 abstract page 1198, right-hand column, paragraph 4 -page 1199, left-hand column, paragraph 1</p> <p>---</p>	1-7, 10-16
Y	<p>DATABASE BIOSIS 'Online! BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; 2000 SHU QUAN ET AL: "Dietary Bifidobacterium lactis (HN019) enhances resistance to oral <i>Salmonella typhimurium</i> infection in mice." Database accession no. PREV200000229776 XP002194172 abstract & MICROBIOLOGY AND IMMUNOLOGY, vol. 44, no. 4, 2000, pages 213-222, ISSN: 0385-5600</p> <p>---</p>	1-7, 10-16
X	<p>DATABASE BIOSIS 'Online! BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; January 1998 (1998-01) XU DAZHONG ET AL: "Elemental diet-induced bacterial translocation associated with systemic and intestinal immune suppression." Database accession no. PREV199800097418 XP002194173 abstract & JOURNAL OF PARENTERAL AND ENTERAL NUTRITION, vol. 22, no. 1, January 1998 (1998-01), pages 37-41, ISSN: 0148-6071</p> <p>---</p>	1-5, 10-13
A	<p>ROBERFROID M B ET AL: "Dietary fructans." ANNUAL REVIEW OF NUTRITION, vol. 18, 1998, pages 117-143, XP000856009 1998 Annual Reviews Inc. P.O. Box 10139, 4139 El Camino Way, Palo Alto, California 94306, USA ISBN: 0-8243-2818-3 the whole document</p> <p>-----</p>	1-18